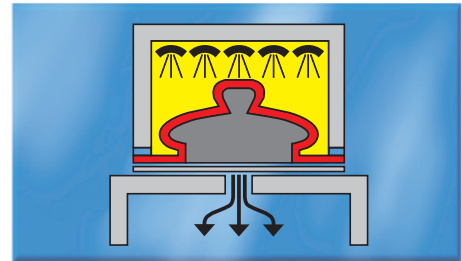


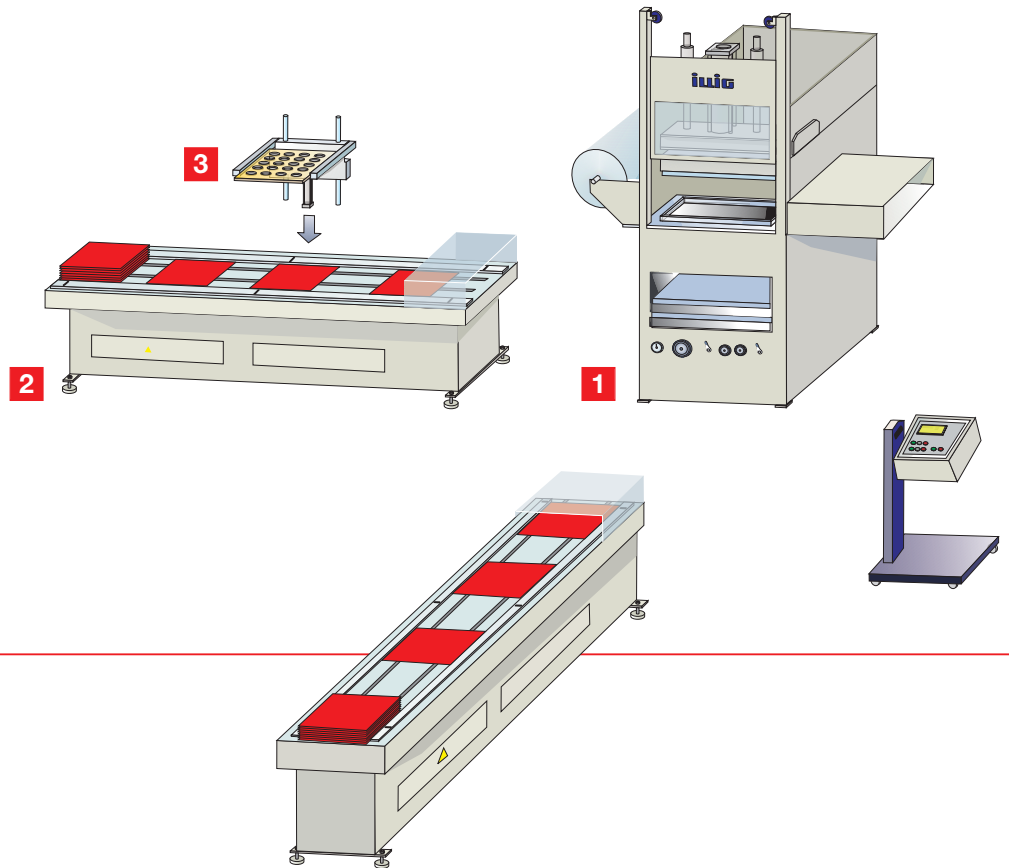
illig®



**Skin packaging and
blister forming machines
SB 53c, SB 74e, SB 100c**

The ILLIG SB system

– universal machine concept for thermoforming and skin packaging



Highly developed machine concept for more flexible and cost-effective packaging

Manufacturing of high-quality products as well as optimum product presentation are some of the elements of modern packaging concepts. The ILLIG skin packaging system provides production and packaging solutions for economic production.

The basis of the pack consists of a card printed on both sides. Top and bottom side of the card can be decorated with single or multi-color printing.

The transparency of the skin material (Surlin) in combination with a highly-transparent sealing layer enhances the print of the card resulting in a high-quality, sales-promoting way of presentation.

Shorter heating times are required thanks to the material's good absorption properties. This results in shorter cycle times.

The card is coated with a primer so the plastics material will optimally adhere to the card.



equipment variants

skin packaging and blister forming

expansion level for one cross cut

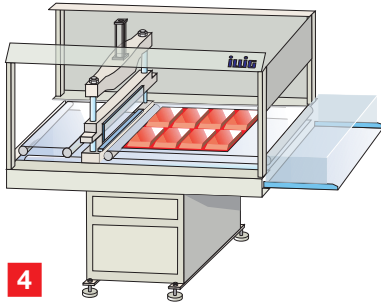
expansion level longitudinal and cross cutter

SB 74e expansion level

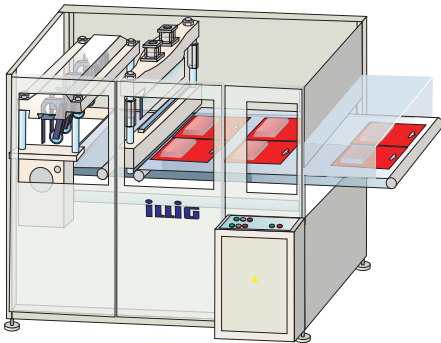
contour punching

card feeding table variants

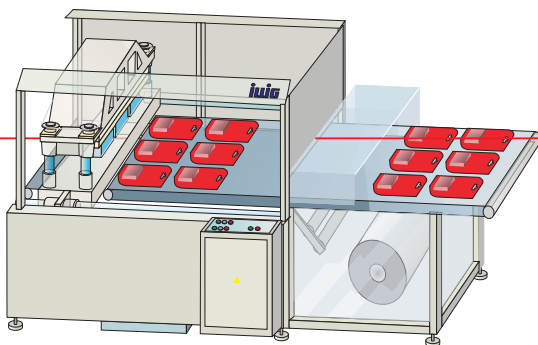
machine setting data



4



5



6

1 skin packaging and blister forming machine
SB 53c
SB 74e
SB 100c

4 cross cutter for one cross cut
SB 53c-1 and c-2
SB 74e-1 and e-2
SB 100c-1 and c-2

2 automatic feeding table for skin card
SB 53c
SB 74e
SB 100c

5 longitudinal and cross cutter
SB 53c-3 and c-4
SB 74e-3 and e-4
SB 100c-3 and c-4

3 Loading template device
SB 53c
SB 74e
SB 100c

6 steel rule punch press station
SB 74e- 9
SB 74e-10

Skin packaging is the ideal solution for manufacturing cost-effective packs. No follow-up investments in tools or conversion times are required. Ideal transport protection is achieved due to the excellent fixing of the products on the card. Count control of the content can be performed without opening the pack.

Moreover, the pack is an ideal information carrier with respect to the packed products. The entire card area (on both sides) can be used for advertisement or information purposes. There is also sufficient space to accommodate EAN codes and operating instructions.

Attractive packaging concepts, high product quality and – last but not least – good acceptance in the market call for high-performance and reliable machines to cope with the packaging volumes required.

Three basic systems featuring DIN-size forming areas meet specific customer demands.

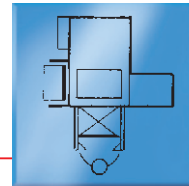


illig

Skin packaging and blister forming ILLIG SB system



SB 53c with manual feeding table



C

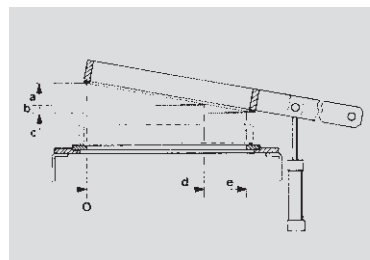
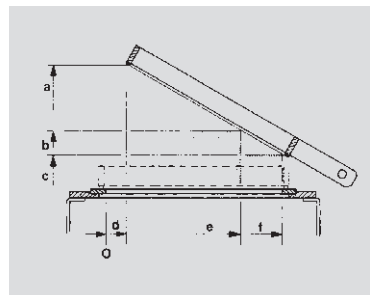
The basic machine is suitable for processing roll and sheet material. The skin packaging machine turns into a vacuum former by locking the blow box, the material can be pneumatically pre-stretched. At the same time the available air in the blow box is used to support the material during heating. Thanks to universal sequencing of pre-stretcher and table, parts can be formed out of different material thicknesses.

The equipment of **SB** machines can be adapted to meet the demands of users with respect to automation and performance level.

The basic machine is set up accordingly.

An automatic card feeding table with four working stations for operatives is recommendable for higher packaging volumes. The cards are positioned on this table, card dimensions are in accordance with the forming area. If all items to be packed are positioned on the card, the automatic mode of the machine performs all further functions.

Subsequently the cards holding the items are transported into the skin packaging machine where the heated material safely bonds with the card by means of high suction forces. Cooling blowers employed ensure fast cooling as well as high cycle speeds.



Passage height for formed parts with manual clamping frame

| dim. | SB 53c | SB 74e | SB 100c |
|------|--------|--------|---------|
| a | 298 | 345 | 345 |
| b | 150 | 150 | 150 |
| c | 95 | 95 | 95 |
| d | 57 | 70 | 70 |
| e | 307 | 407 | 407 |
| f | 405 | 500 | 500 |

Passage height for formed parts with pneumatic clamping frame

| dim. | SB 53c | SB 74e | SB 100c |
|------|--------|--------|---------|
| a | 200 | 215 | 215 |
| b | 150 | 150 | 150 |
| c | 130 | 130 | 130 |
| d | 307 | 380 | 380 |
| e | 405 | 500 | 500 |



thermoforming of parts
with pre-stretcher

equipment variants

skin packaging and
blister forming

expansion level
for one cross cut

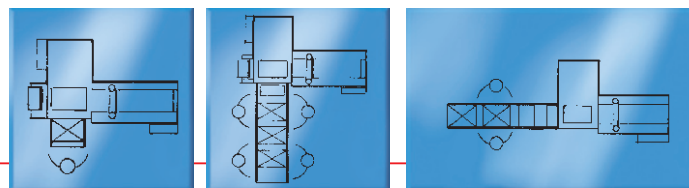
expansion level
longitudinal and cross cutter

SB 74e expansion level

contour punching

card feeding table variants

machine setting data



c-1

c-2

c-2 linear

Automatic blister forming machine
expansion level with
cross cutter

Machine versions **c (e)-1** and **c (e)-2** extend the basic machine by the cross cutting unit as well as a manual and/or automatic card feeding unit. Equipped this way the basic machine is turned into an automatic blister former. Skin packs can be produced to the optimum of the format in this machine.

For the production of complex shapes, options are available such as pre-stretcher system, automatic pre-blowing, 2-up cooling blower, 4-up spray nozzle cooling and reinforced heating.

A cooling device for the forming table is suitable to achieve higher cycle speeds. The multiple packs resulting from the forming process can be separated by a cylinder punch.



SB 53c-1 skin packaging and blister forming machine

**Production of packs, ready for sale,
with longitudinal and cross cutter**



SB 53c-4 skin packaging
and blister forming
machine

**C-3 and c-4
version with longitudinal
and cross cutter**
for several cross cuts.

The longitudinal and cross
cutting unit behind the skin
packaging machine transports
the multiple pack out of the
forming machine.

During this transport move-
ment the longitudinal cut is
performed by means of
crushing knives which are
arranged on the knife shaft
in a movable way.

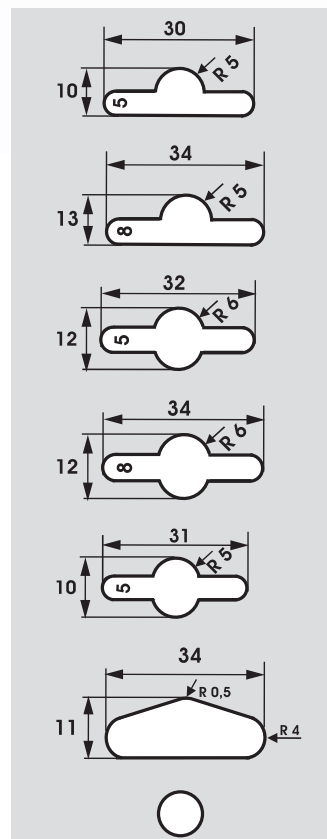
The cross cutting positions
are determined by cam
switches on a switching bar.
If frequent product changes
are required, conversion
times are reduced by
changing the entire switching
bar with the cams arranged

on it. Cutting positions are
maintained for follow-up
orders.

Control devices on longi-
tudinal and cross cutter
prevent damage to the knives
resulting from machine stops.
The error is displayed.

No further follow-up treat-
ment is required since
punching of the hanging
holes takes place at the
same time.

**All standard sizes of hole
punches are available from
stock. All conventional hole
shapes can be supplied.**



size 86

size 86 - 1

size 87

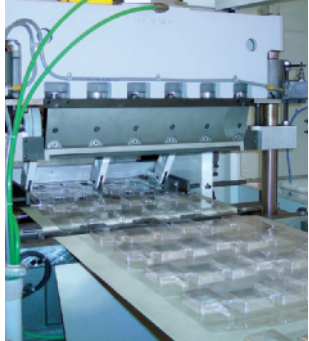
size 87 - 1

size 88

size 89

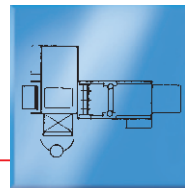
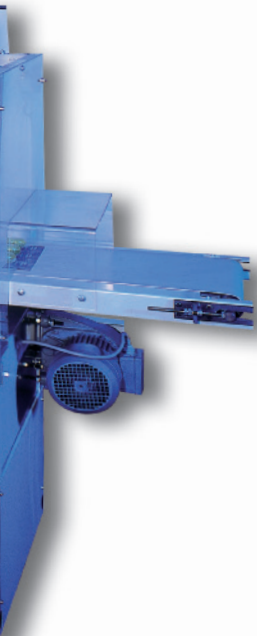
round hole 8 mm

conventional hole shapes

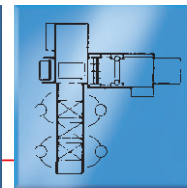


blisters can be made also from thin foils

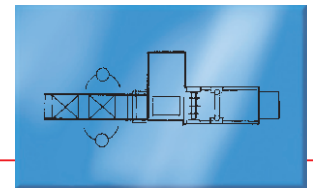
- equipment variants
- skin packaging and blister forming
- expansion level for one cross cut
- expansion level longitudinal and cross cutter**
- SB 74e expansion level
- contour punching
- card feeding table variants
- machine setting data



c-3



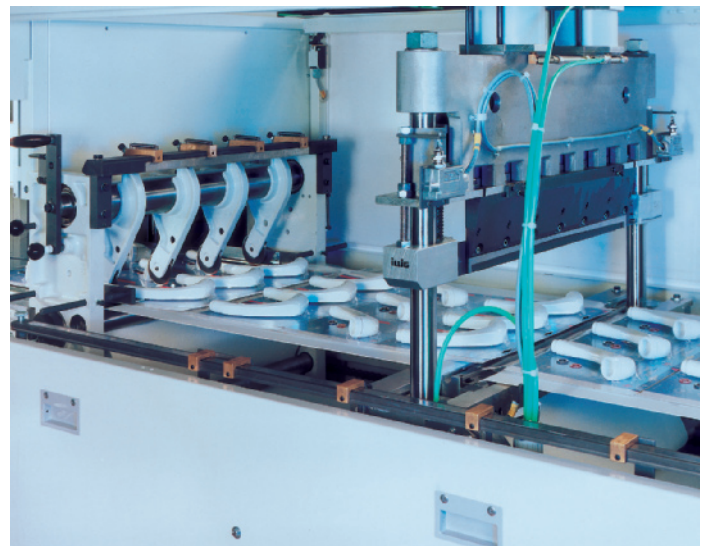
c-4



c-4 linear

Packs produced on ILLIG skin packaging machines are characterized by high quality and flexible application ranges.

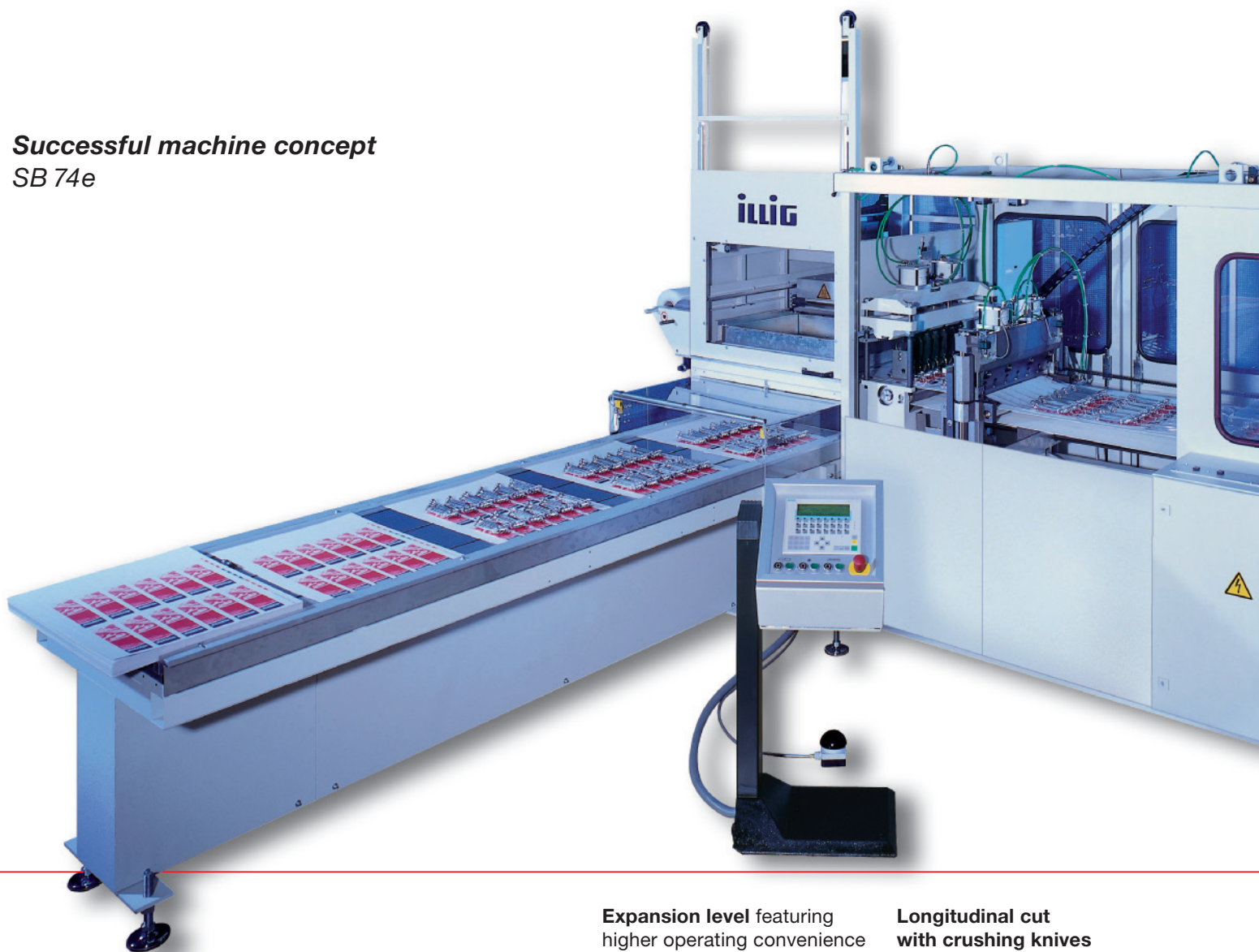
The machines ensure high production output with constant quality as well as high flexibility due to smooth format changes.



SB 53c-3 and SB 53c-4 longitudinal and cross cutter



Successful machine concept
SB 74e



Expansion level featuring higher operating convenience SB 74e-3 and e-4

The successful SB concept was consistently developed for users in practice. The resulting machine features simple operation and ease of maintenance, it thus meets all requirements of everyday production.

Longitudinal and cross cutting systems as well as a punching device for hanging holes are essential elements of the machine. The positions of hole punch press and cross cutter can be digitally set.

Longitudinal cut with crushing knives

The longitudinal cutting knives are mounted on a carrier rail and can be adjusted to the required grid dimensions outside the machine. The unit can be changed as a whole thanks to the quick-change technology.

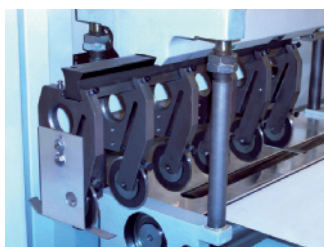
Programming of cross cutters

The individual cutting positions are digitally entered on the operating panel. A cutting accuracy of ± 0.5 mm is achieved by using combined drive technology: electric motor, ball screw and absolute path encoder. No further follow-up treatment is required after longitudinal and cross cutting.

Control devices on longitudinal and cross cutter prevent damage to the knives caused by machine stops.



SB 74e-3 and SB 74e-4 longitudinal and cross cutter with quick-change technology of longitudinal knives



change of longitudinal knives

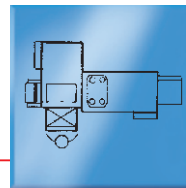


SB 74e-4 skin packaging and blister forming machine

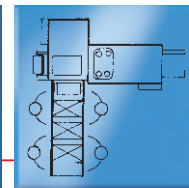


steel rule punch press of contour cuts

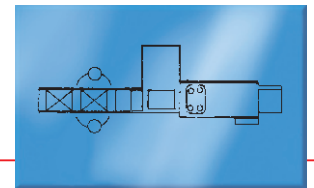
- equipment variants
- skin packaging and blister forming
- expansion level for one cross cut
- expansion level longitudinal and cross cutter
- SB 74e expansion level**
- contour punching**
- card feeding table variants
- machine setting data



e-9



e-10



e-10 linear

SB 74e-9 and e-10 equipment

contour punching with steel rule dies

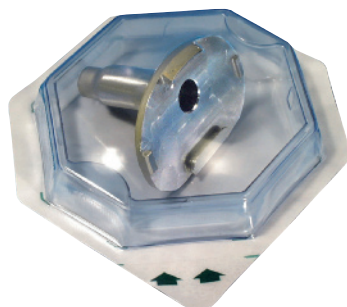
Contour cuts help to improve the pack's eye appeal. Rounded corners and geometric shapes enhance the quality of the pack thus increasing the value of the content.

Punching of the hanging holes and pack separation is carried out in one working step.

A single-row steel rule cutter with integrated hole punches is sufficient for singularization of the packs. The required punching strokes are performed across the whole card format, the punching positions can be set.

Items which might be located in the area of the dies are detected by a control device, this way damage to the knives can be prevented. Items from a thickness of 1.5 mm onward can be detected.

The packs are discharged together with the skeletal and broken out by means of a deviating roll. The skeletal is rewound.



enhanced packs SB 74e-9 and SB 74e-10 contour cuts with steel rule punch press

The modular concept

card feeding table, for manual and automatic operation



Comprehensive machine equipment is available for skin packaging, subject to customer demands and automation level required.

Machine formats according to DIN standards permit an adaptation to the production situation and the required performance. Should packs not fit into the DIN system, formats can be reduced accordingly. This way optimum utilization of the pack formats is ensured with minimum material loss at the same time.

The complete downstream equipment is adjusted to this reduced format.

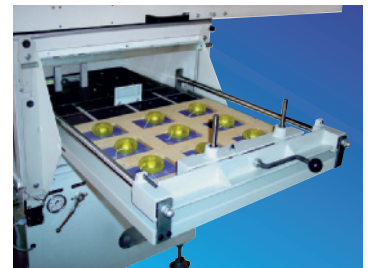


positioning of goods by means of loading template

For automatic skin packaging the card feeding table is linked with the machine. It can be used for all skin packaging machines and is available in two different versions:

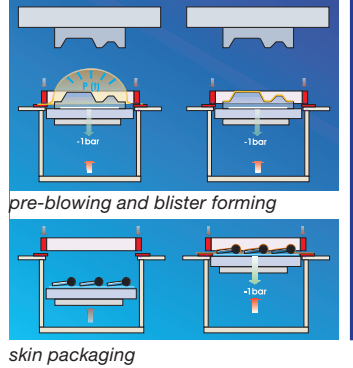
- Manual feeding table which can be completed by a loading template.
- Motor-driven card feeding table with several workings stations for operatives.

Depending on conditions at site, the card feeding table can be arranged in a linear or rectangular way with respect to the forming machine, however, the card feeding direction must be considered. If many goods must be packed per card, the loading template facilitates exact positioning. The template, controlled in sequence, is synchronized with the transport movement of the card.



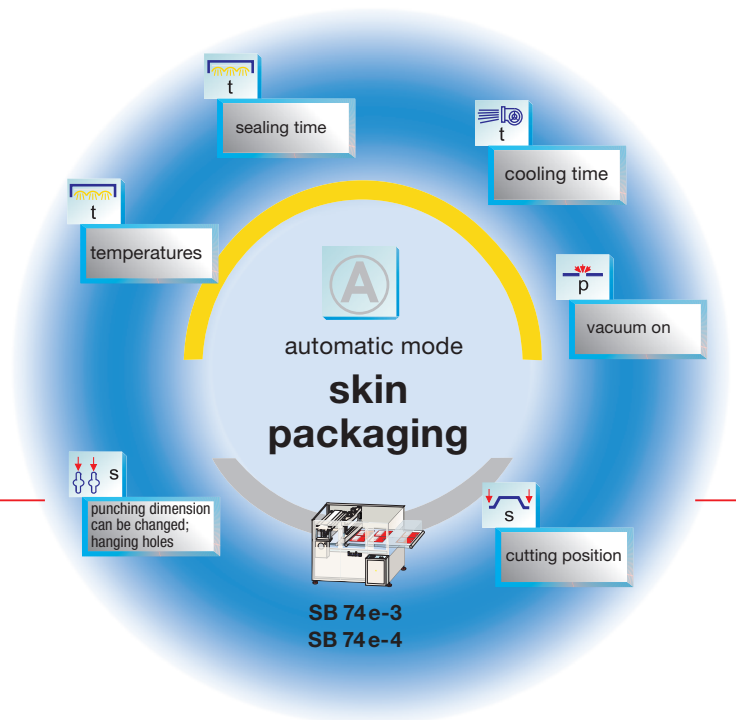
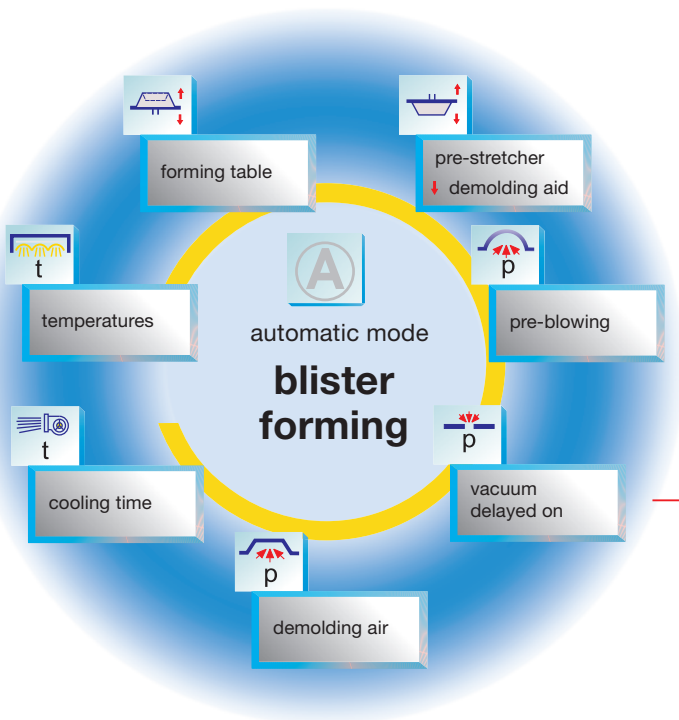
manual feeding table with loading template

Machine types c (e)-2, -4 and -10 feature a motor-driven feeding table for the loaded card.



skin packaging

- equipment variants
- skin packaging and blister forming
- expansion level for one cross cut
- expansion level longitudinal and cross cutter
- SB 74e expansion level
- contour punching
- card feeding table variants
- machine setting data



SB 74e-3
SB 74e-4

High operating convenience due to Siemens S7 control

State-of-the-art control and visualization technology provides highest operating convenience.

Data storage is an essential factor for short set-up times and high availability, especially when frequent product changes are concerned. The established data are available right away for repeat orders.

Up to 20 product-related data sets can be stored. Besides its flexibility, the Siemens S7-300 PLC features worldwide service options as well as a safe spare parts supply.

The machine control is set up for two basic programs, i.e. skin or blister program can be selected. The respective machine functions are activated subject to this selection.

For troubleshooting the user benefits from a comprehensive error diagnosis system thus downtimes of the machine are reduced to a minimum. A one-cycle and a continuous testing program are integrated in the control for easy detection of causes for malfunction.

upon entering the production parameters, the automatic program is activated

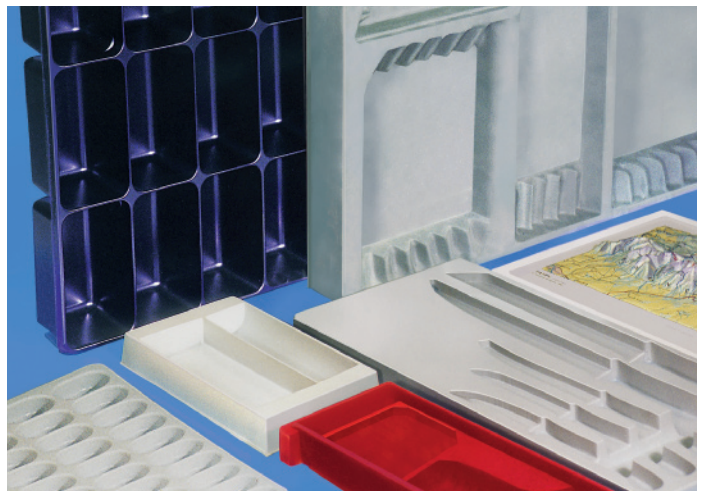


error diagnosis



possibility to store 20 data sets

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SYSTEMS
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Sheet processing machines
Automatic roll-fed thermoformers for forming/punching tools
Automatic roll-fed thermoformers, separate forming and punching
Skin and blister packaging machines
Form, fill and seal lines
Produced Tooling